

Work Order ID 150481

Wednesday, August 24, 2016 12:02:21 PM

150481

Page 1

Item ID: 646.3001 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Lower Cutter Assembly
 Start Date: 8/11/2016 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 8/24/2016 Req'd Qty: 2.00 ***2*** Customer:

Reference:

Approvals: Process Plan: **DAS 21 9-89** Date: **AUG 30 2016** Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
646.3000	N/C

110 Pick Kit 0.00

110

Packaging Memo 0.01

Packaging

DAS 6 9-89

(2)

SEP 20 2016

120

120

Small Fab Memo 0.24

Small Fab

Assemble as per dwg and apply loctite 598 on all faying surfaces shown on dwg per note 7.

A/R RTV LOCTITE 598: **135497**

exp. date: **01/18**

2x

18/10/17 **DAS 36 9-89**

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.07				<u>2</u>			DAS 38 9-89 OCT 14 2016
140 *140* Packaging Packaging	Identify as per dwg & Stock Location <u>CC018</u> Memo ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***	0.00 0.00				<u>2</u>			DAS 21 9-89 OCT 17 2016
150 *150* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.01							DAS 21 9-89 OCT 18 2016 DAS 21 9-89 OCT 17 2016

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

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Page 1

Work Order ID: 150481

150481

Parent Item: 646.3001

646.3001

Parent Item Name: Lower Cutter Assembly

Start Date: 8/11/2016

Required Date: 8/24/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 12.10.19 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MS21042L08		Purchased	No				Each	946.0000		38			DAS 6 9-89
MS21042L 08									**				
Nut													

Location	Loc Qty	Loc Code
CCK003	125	
m135408	125	
GA	131	
m134063	131	
ST303	690	
m133922	37	
m135046	153	
m135133	100	
m135274	100	
<u>m135466</u>	300	

646.3010

Manufactured No

110 Each 26.0000 1 2

646.3010

LH Half

Location	Loc Qty	Loc Code
cck102	14	
142499	14	
<u>CCK108A</u>	12	
142499	12	

DAS
6
9-89

SEP 20 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____ _____ _____			
Misidentified ☐	☐	Past Due ☐	☐				

Picklist Print

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Page 2

Work Order ID: 150481

150481

Parent Item: 646.3001

646.3001

Parent Item Name: Lower Cutter Assembly

Start Date: 8/11/2016

Required Date: 8/24/2016

Start Qty: 2.00

Required Qty: 2.00

646.3011 Manufactured No 110 Each 21.0000 1 2

646.3011

RH Half

DAS
9-89

Location

Loc Qty

Loc Code

cck102

9

142473

9

CCK108A

12

148317

12

2

646.3012

Manufactured No

110 Each

14.0000

1

2

646.3012

Lower Guide

DAS
9-89

Location

Loc Qty

Loc Code

CCK013

14

141006

14

2

646.3013

Manufactured No

110 Each

20.0000

1

2

646.3013

Blade

DAS
9-89

Location

Loc Qty

Loc Code

cck103

20

142489

10

148253

10

1

1

646.3014

Manufactured No

110 Each

23.0000

1

2

646.3014

Blade

DAS
9-89

Location

Loc Qty

Loc Code

cck103

23

142467

11

148275

12

2

SEP 20 2016

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Shop Packet Print

Page 2

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
2/20/2016 2/20/2016 2/20/2016				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Work Order ID: 150481

150481

Parent Item: 646.3001

646.3001

Parent Item Name: Lower Cutter Assembly

Start Date: 8/11/2016

Required Date: 8/24/2016

Start Qty: 2.00

Required Qty: 2.00

646.3015 Manufactured No

110 Each 17.0000 1 2

646.3015

Blade

DAS
6
9-89

Location

Loc Qty

Loc Code

cck103

17

141062

7

147542

10

MS27039-08-19

Purchased No

110 Each 411.0000 19 38

MS27039-08-19

Screw

DAS
6
9-89

Location

Loc Qty

Loc Code

GA

232

m132930

84

m133077

22

m134063

64

m135046

62

ST277

179

m135408

79

m135466

100

NAS1149FN832P

Purchased No

110 Each 1,884.000 38 76

NAS1149FN832P

Washer

DAS
6
9-89

Location

Loc Qty

Loc Code

GA

1705

M133316

16

M133769

89

M135058

1600

ST263

179

M134257

179

SEP 20 2016

Wednesday, August 24, 2016 12:02:21 PM

Shop Packet Print

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DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

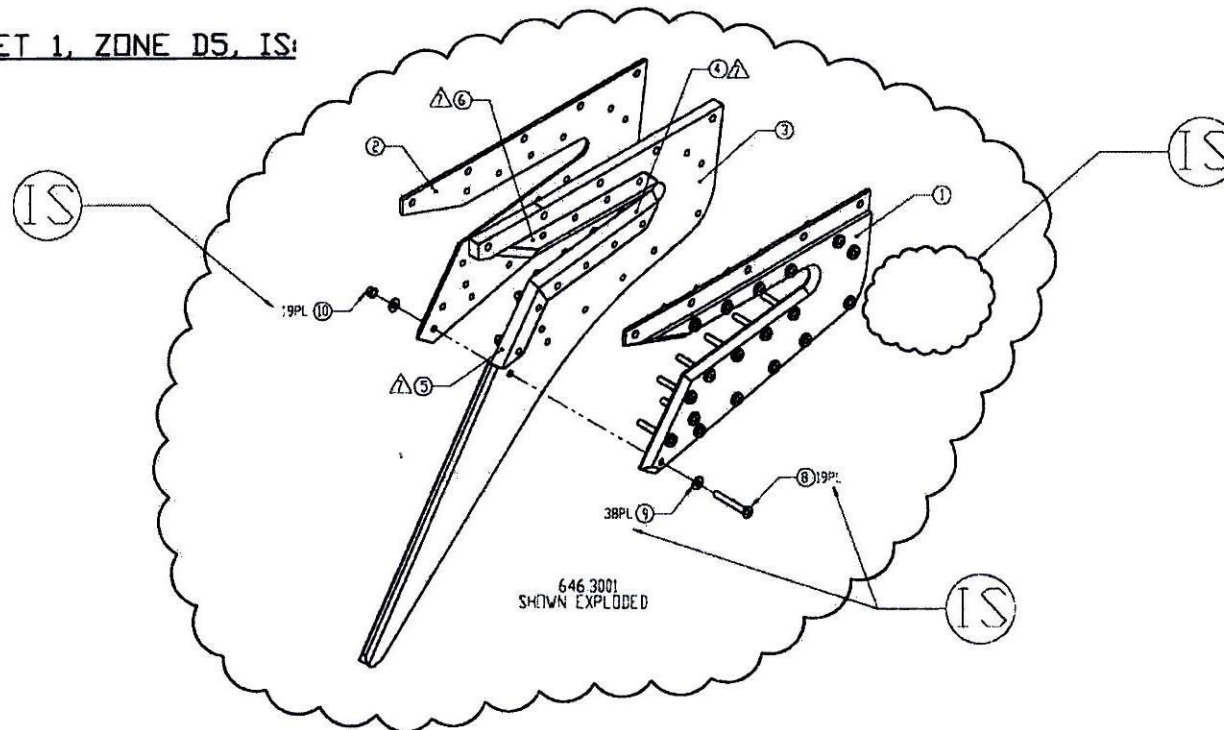
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

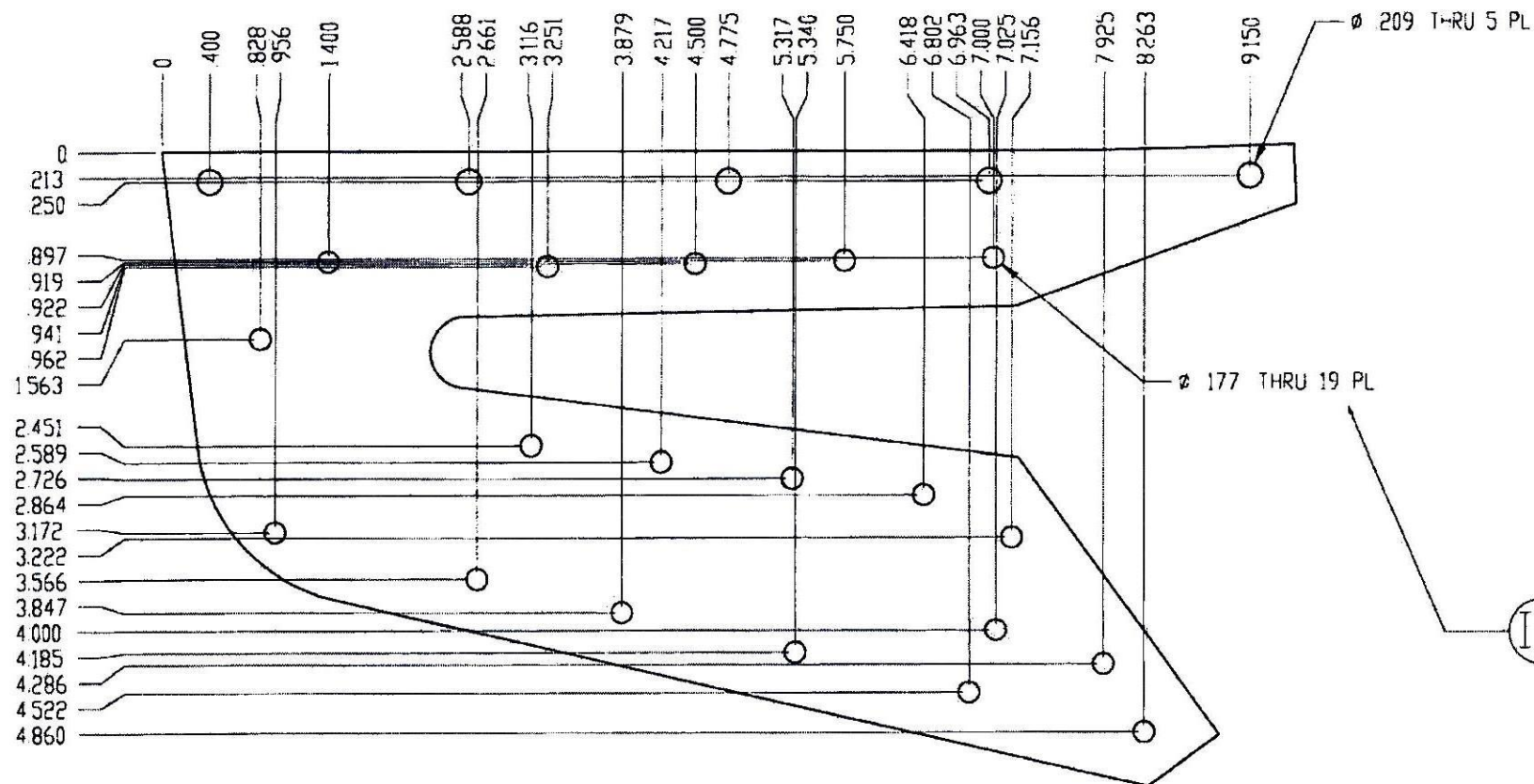
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02195		SHEET 1 OF 4	
	DWG NO. 646.3000	REV: N/C	PREPARED BY S. HUFF	DATE: 01/05/09
	EFFECT ON DWG ☐ INC. ☒ UNINC.			
	DWG TITLE: LOWER CUTTER ASSY			
APPROVED BY: ENGR <i>[Signature]</i>		MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REMOVED RIVETS IN FAVOR OF ADDITIONAL SCREWS		

SHEET 1, ZONE D5, IS:



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 150481 MJS
160830

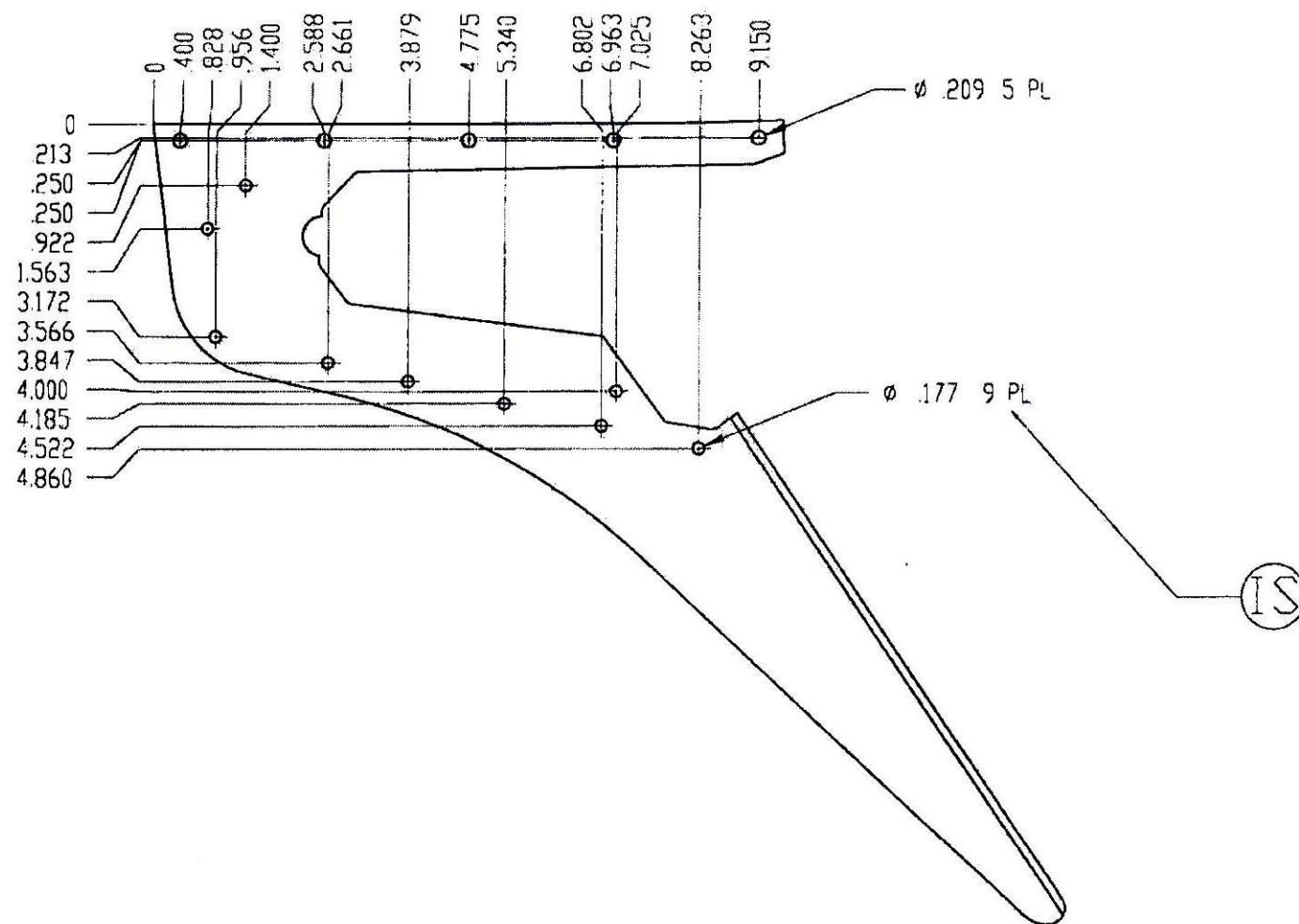
10	R	601.1541	19	LOCKNUT	MS21042L08
9	R	601.2764	38	WASHER	NAS1149FN832P
8	R	601.2765	19	SCREW	MS27039-0819
7	D	601.2766	2	RIVET	MS20470AD5-18
			.3001		
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
DOCUMENTS EFFECTED: ☐ MDL ☒ INSTALL INSTRUC ☒ ICA ☐ FMS ☒ BOM					CHANGE CATEGORY ☐ MAJOR ☒ MINOR
					DER REVIEW REQUIRED ☐ YES ☒ NO

SHEET 3 IS:

SECTION A-A



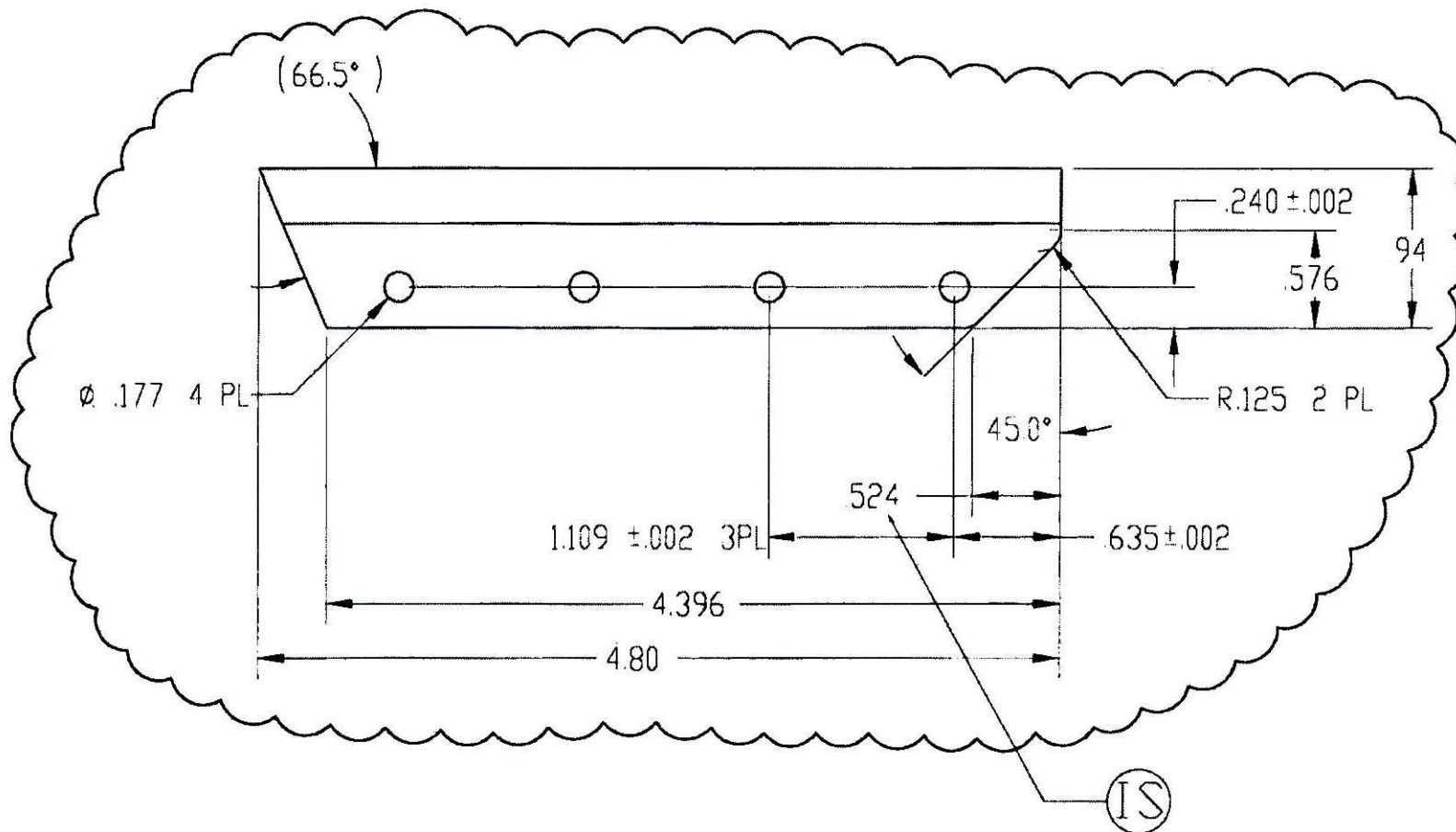
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION

SHEET 5 IS:

SECTION F-F



F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION

SHEET 6, ZONE C4, IS:

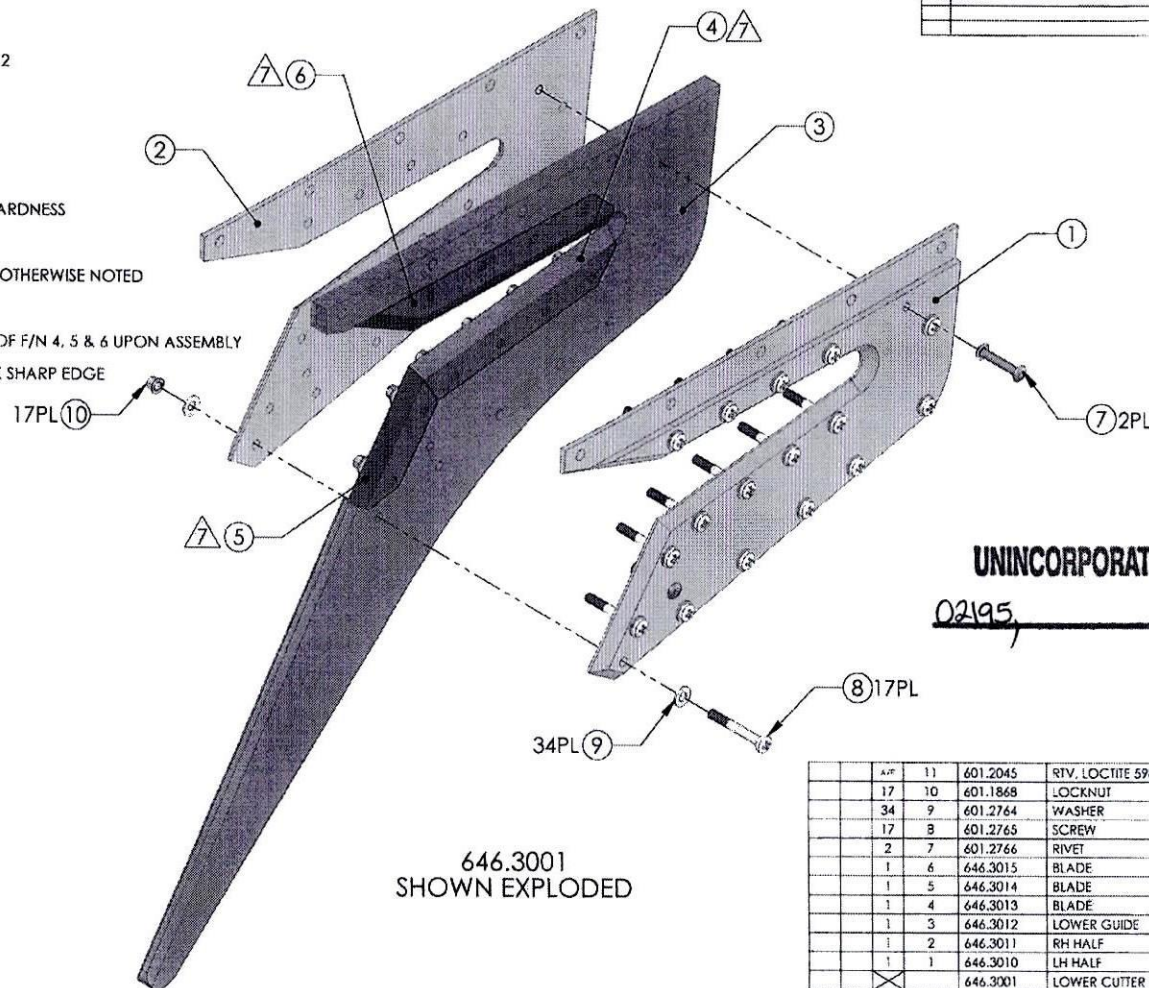
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION

1 2 3 4 5 6 7 8

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NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N
- 5 DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
- 6 IDENTIFY IAW MPP-120
- 7 APPLY F/N 11 AS REQUIRED TO ALL FAYING SURFACES OF F/N 4, 5 & 6 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE



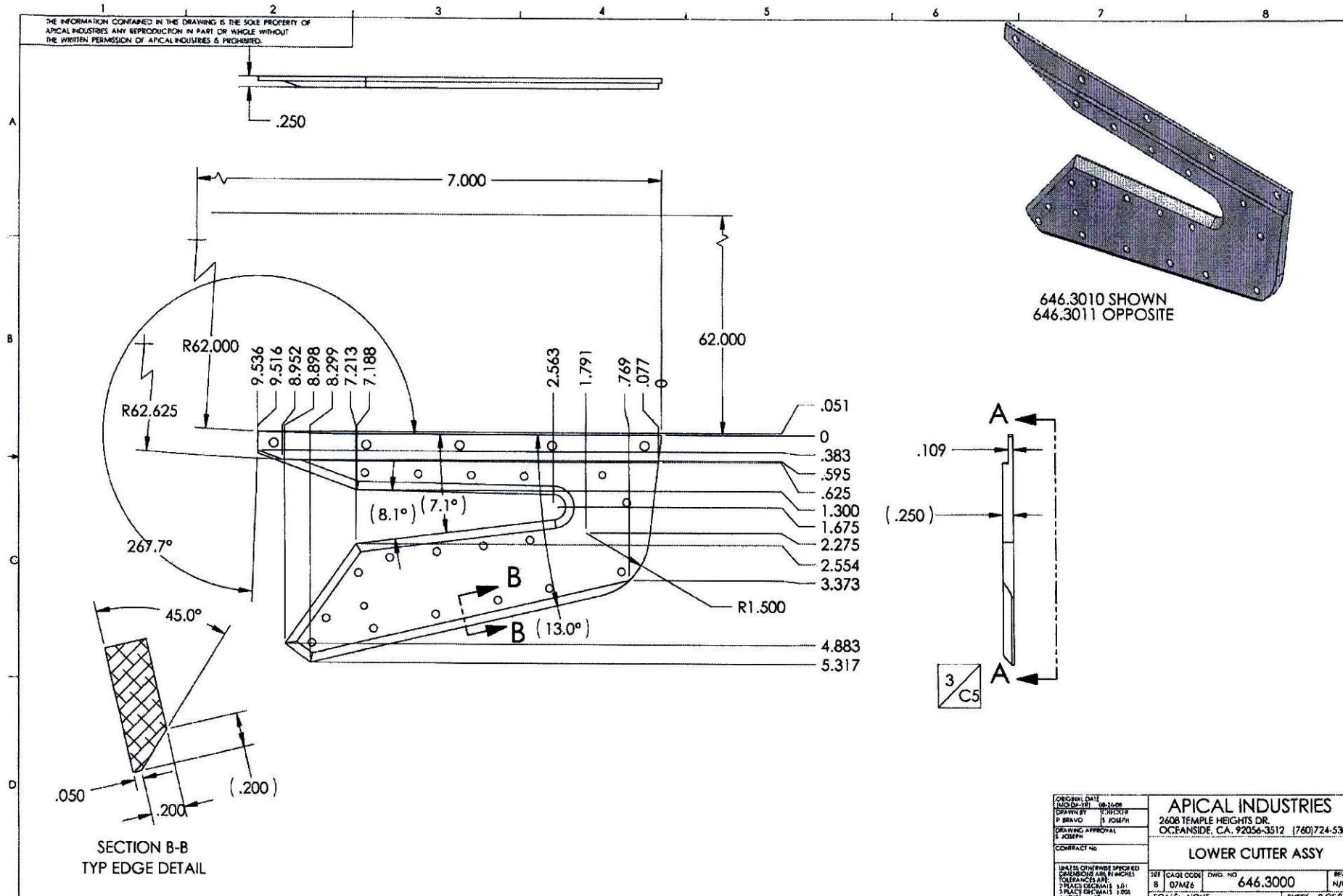
UNINCORPORATED ECN(s)

02195

646.3001
SHOWN EXPLODED

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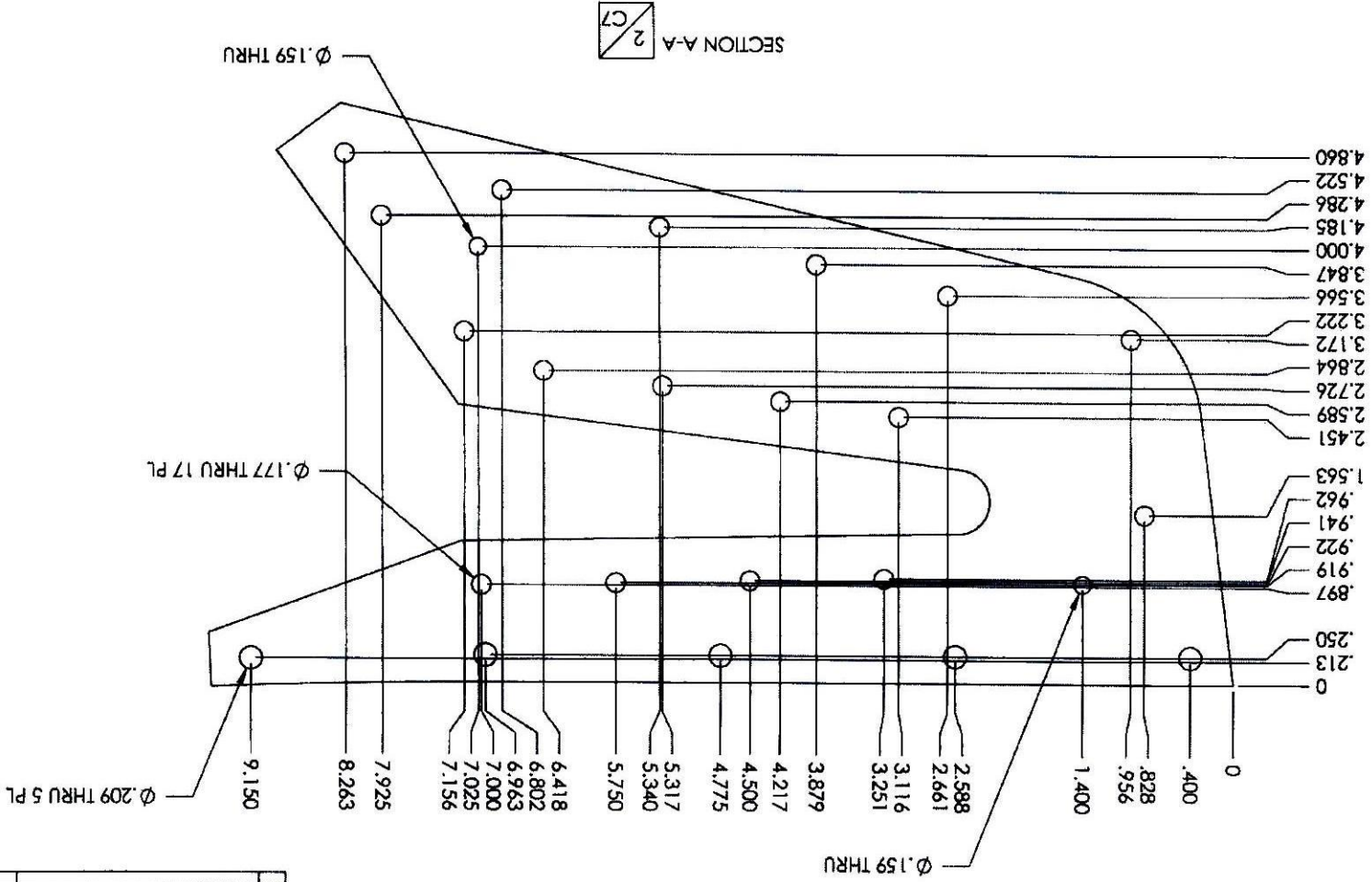
THE INFORMATION CONTAINED IN THE DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



ORIGINAL DATE: 08-15-08			
DRAWN BY: J. JOSEPH			
CHECKED BY: S. JOSEPH			
DRAWING APPROVAL: S. JOSEPH			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.			
TOLERANCES ARE:			
2 PLACES DECIMALS ±.01			
3 PLACES DECIMALS ±.001			
ANGLES ±.5°			
REV.	CAGE CODE	DWG. NO.	REV.
	B 07M26	646.3000	N/C
SCALE: NONE			SHEET 2 OF 8

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

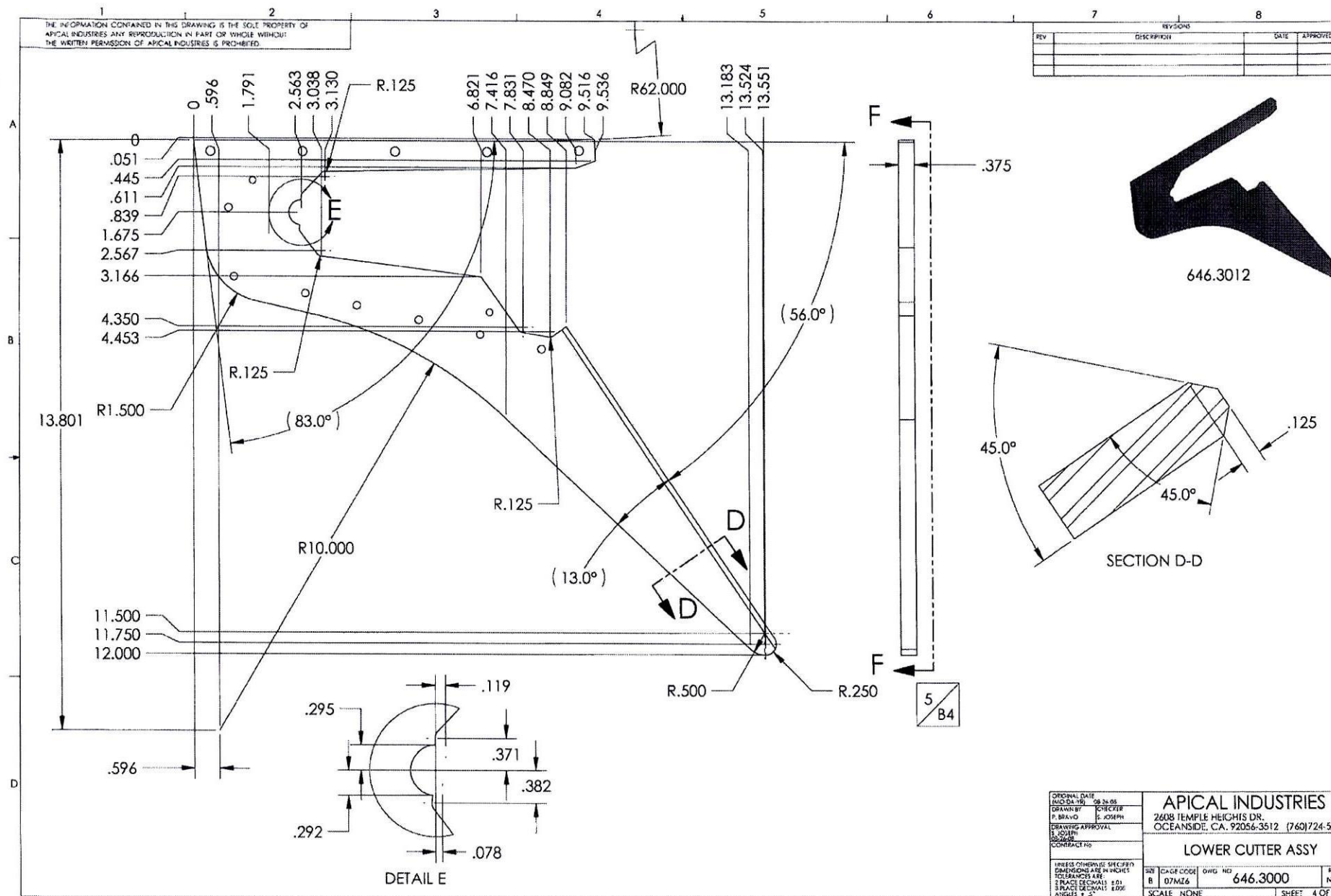
REV	DESCRIPTION	DATE	APPROVED



APICAL INDUSTRIES		2608 TEMPLE HEIGHTS DR.		OCEANSIDE, CA. 92056-3512		760724-5300	
LOWER CUTTER ASSY		REV. 07/06/6		SCALE NONE		SHEET 3 OF 8	
DESIGNED BY		CHECKED BY		APPROVED BY		DATE	
DRAWN BY		CHECKED BY		APPROVED BY		DATE	
CONTRACT NO.		PROJECT NO.		JOB NO.		REV.	
MATERIALS LIST		QUANTITY		UNIT		REV.	
ITEM NO.		DESCRIPTION		QTY		REV.	
1		3/4" DIA. STEEL		1.00		REV.	
2		1/2" DIA. STEEL		1.00		REV.	
3		1/4" DIA. STEEL		1.00		REV.	
4		1/8" DIA. STEEL		1.00		REV.	
5		1/16" DIA. STEEL		1.00		REV.	
6		1/32" DIA. STEEL		1.00		REV.	
7		1/64" DIA. STEEL		1.00		REV.	
8		1/128" DIA. STEEL		1.00		REV.	
9		1/256" DIA. STEEL		1.00		REV.	
10		1/512" DIA. STEEL		1.00		REV.	
11		1/1024" DIA. STEEL		1.00		REV.	
12		1/2048" DIA. STEEL		1.00		REV.	
13		1/4096" DIA. STEEL		1.00		REV.	
14		1/8192" DIA. STEEL		1.00		REV.	
15		1/16384" DIA. STEEL		1.00		REV.	
16		1/32768" DIA. STEEL		1.00		REV.	
17		1/65536" DIA. STEEL		1.00		REV.	
18		1/131072" DIA. STEEL		1.00		REV.	
19		1/262144" DIA. STEEL		1.00		REV.	
20		1/524288" DIA. STEEL		1.00		REV.	
21		1/1048576" DIA. STEEL		1.00		REV.	
22		1/2097152" DIA. STEEL		1.00		REV.	
23		1/4194304" DIA. STEEL		1.00		REV.	
24		1/8388608" DIA. STEEL		1.00		REV.	
25		1/16777216" DIA. STEEL		1.00		REV.	
26		1/33554432" DIA. STEEL		1.00		REV.	
27		1/67108864" DIA. STEEL		1.00		REV.	
28		1/134217728" DIA. STEEL		1.00		REV.	
29		1/268435456" DIA. STEEL		1.00		REV.	
30		1/536870912" DIA. STEEL		1.00		REV.	
31		1/1073741824" DIA. STEEL		1.00		REV.	
32		1/2147483648" DIA. STEEL		1.00		REV.	
33		1/4294967296" DIA. STEEL		1.00		REV.	
34		1/8589934592" DIA. STEEL		1.00		REV.	
35		1/17179869184" DIA. STEEL		1.00		REV.	
36		1/34359738368" DIA. STEEL		1.00		REV.	
37		1/68719476736" DIA. STEEL		1.00		REV.	
38		1/137438953472" DIA. STEEL		1.00		REV.	
39		1/274877906944" DIA. STEEL		1.00		REV.	
40		1/549755813888" DIA. STEEL		1.00		REV.	
41		1/1099511627776" DIA. STEEL		1.00		REV.	
42		1/2199023255552" DIA. STEEL		1.00		REV.	
43		1/4398046511104" DIA. STEEL		1.00		REV.	
44		1/8796093022208" DIA. STEEL		1.00		REV.	
45		1/17592186444416" DIA. STEEL		1.00		REV.	
46		1/35184372888832" DIA. STEEL		1.00		REV.	
47		1/70368745777664" DIA. STEEL		1.00		REV.	
48		1/140737491555328" DIA. STEEL		1.00		REV.	
49		1/281474983110656" DIA. STEEL		1.00		REV.	
50		1/562949966221312" DIA. STEEL		1.00		REV.	
51		1/1125899932442624" DIA. STEEL		1.00		REV.	
52		1/2251799864885248" DIA. STEEL		1.00		REV.	
53		1/4503599729770496" DIA. STEEL		1.00		REV.	
54		1/9007199459540992" DIA. STEEL		1.00		REV.	
55		1/18014398919081984" DIA. STEEL		1.00		REV.	
56		1/36028797838163968" DIA. STEEL		1.00		REV.	
57		1/72057595676327936" DIA. STEEL		1.00		REV.	
58		1/144115191352655872" DIA. STEEL		1.00		REV.	
59		1/288230382705311744" DIA. STEEL		1.00		REV.	
60		1/576460765410623488" DIA. STEEL		1.00		REV.	
61		1/1152921530821246976" DIA. STEEL		1.00		REV.	
62		1/2305843061642493952" DIA. STEEL		1.00		REV.	
63		1/4611686123284987904" DIA. STEEL		1.00		REV.	
64		1/9223372246569975808" DIA. STEEL		1.00		REV.	
65		1/18446744493139951616" DIA. STEEL		1.00		REV.	
66		1/36893488986279903232" DIA. STEEL		1.00		REV.	
67		1/73786977972559806464" DIA. STEEL		1.00		REV.	
68		1/147573955945119612928" DIA. STEEL		1.00		REV.	
69		1/295147911890239225856" DIA. STEEL		1.00		REV.	
70		1/590295823780478451712" DIA. STEEL		1.00		REV.	
71		1/1180591647560956903424" DIA. STEEL		1.00		REV.	
72		1/2361183295121913806848" DIA. STEEL		1.00		REV.	
73		1/4722366590243827613696" DIA. STEEL		1.00		REV.	
74		1/9444733180487655227392" DIA. STEEL		1.00		REV.	
75		1/18889466360973110454784" DIA. STEEL		1.00		REV.	
76		1/37778932721946220909568" DIA. STEEL		1.00		REV.	
77		1/75557865443892441819136" DIA. STEEL		1.00		REV.	
78		1/151115730887784883638272" DIA. STEEL		1.00		REV.	
79		1/302231461775569767276544" DIA. STEEL		1.00		REV.	
80		1/604462923551139534553088" DIA. STEEL		1.00		REV.	
81		1/1208925847102279069106176" DIA. STEEL		1.00		REV.	
82		1/2417851694204558138212352" DIA. STEEL		1.00		REV.	
83		1/4835703388409116276424704" DIA. STEEL		1.00		REV.	
84		1/9671406776818232552849408" DIA. STEEL		1.00		REV.	
85		1/19342813553636465105698816" DIA. STEEL		1.00		REV.	
86		1/38685627107272930211397632" DIA. STEEL		1.00		REV.	
87		1/77371254214545860422795264" DIA. STEEL		1.00		REV.	
88		1/154742508429091720845590528" DIA. STEEL		1.00		REV.	
89		1/309485016858183441691181056" DIA. STEEL		1.00		REV.	
90		1/618970033716366883382362112" DIA. STEEL		1.00		REV.	
91		1/1237940067432733766764724224" DIA. STEEL		1.00		REV.	
92		1/2475880134865467533529448448" DIA. STEEL		1.00		REV.	
93		1/4951760269730935067058896896" DIA. STEEL		1.00		REV.	
94		1/9903520539461870134117793792" DIA. STEEL		1.00		REV.	
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96		1/39614082157847480536471571712" DIA. STEEL		1.00		REV.	
97		1/79228164315694961072943143424" DIA. STEEL		1.00		REV.	
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101		1/1267650629051119377167090294784" DIA. STEEL		1.00		REV.	
102		1/2535301258102238754334180589568" DIA. STEEL		1.00		REV.	
103		1/5070602516204477508668361179136" DIA. STEEL		1.00		REV.	
104		1/1014120503240895501733672237824" DIA. STEEL		1.00		REV.	
105		1/2028241006481791003467344475648" DIA. STEEL		1.00		REV.	
106		1/4056482012963582006934688951296" DIA. STEEL		1.00		REV.	
107		1/8112964025927164013869377902592" DIA. STEEL		1.00		REV.	
108		1/16225928058454328027738755805184" DIA. STEEL		1.00		REV.	
109		1/32451856116908656055477511610368" DIA. STEEL		1.00		REV.	
110		1/64903712233817312110955023220736" DIA. STEEL		1.00		REV.	
111		1/129807424477634624221910046441472" DIA. STEEL		1.00		REV.	
112		1/259614848955269248443820092882944" DIA. STEEL		1.00		REV.	
113		1/519229697910538496887640185765888" DIA. STEEL		1.00		REV.	
114		1/1038459395821076993775280371531776" DIA. STEEL		1.00		REV.	
115		1/2076918791642153987550560743063552" DIA. STEEL		1.00		REV.	
116		1/4153837583284307975101121486127104" DIA. STEEL		1.00		REV.	
117		1/8307675166568615950202242972254208" DIA. STEEL		1.00		REV.	
118		1/16615350331137231900404485844508416" DIA. STEEL		1.00		REV.	
119		1/33230700662274463800808971689016832" DIA. STEEL		1.00		REV.	
120		1/66461401324548927601617943378033664" DIA. STEEL		1.00		REV.	
121		1/1329228026490978552032358867566672" DIA. STEEL		1.00		REV.	
122		1/2658456052981957104064717735133344" DIA. STEEL		1.00		REV.	
123		1/5316912105963914208129435470266688" DIA. STEEL		1.00		REV.	
124		1/10633824211927828416258870940533376" DIA. STEEL		1.00		REV.	
125		1/21267648423855656832517741881066752" DIA. STEEL		1.00		REV.	
126		1/42535296847711313665035483762133504" DIA. STEEL		1.00		REV.	
127		1/85070593695422627330070967524267008" DIA. STEEL		1.00		REV.	
128		1/170141187390845254660141935048534016" DIA. STEEL		1.00		REV.	
129		1/340282374781690509320283870097068032" DIA. STEEL		1.00		REV.	
130		1/680564749563381018640567740194136064" DIA. STEEL		1.00		REV.	
131		1/1361129499126762037281135480388272128" DIA. STEEL		1.00		REV.	
132		1/2722258998253524074562270960776544256" DIA. STEEL		1.00		REV.	
133		1/5444517996507048149124541921553088512" DIA. STEEL		1.00		REV.	
134		1/10889035993014096298249083843106176" DIA. STEEL		1.00		REV.	
135		1/21778071986028192596498177682212352" DIA. STEEL		1.00		REV.	
136		1/43556143972056385192996355364424704" DIA. STEEL		1.00		REV.	
137		1/87112287944112770385992710728849408" DIA. STEEL		1.00		REV.	
138		1/174224575888225540771985421457698176" DIA. STEEL		1.00		REV.	
139		1/348449151776451081543970842915396352" DIA. STEEL		1.00		REV.	
140		1/696898303552902163087941685830792704" DIA. STEEL		1.00		REV.	
141		1/1393796607105804326175883371661585408" DIA. STEEL		1.00		REV.	
142		1/2787593214211608652351766743323170816" DIA. STEEL		1.00		REV.	

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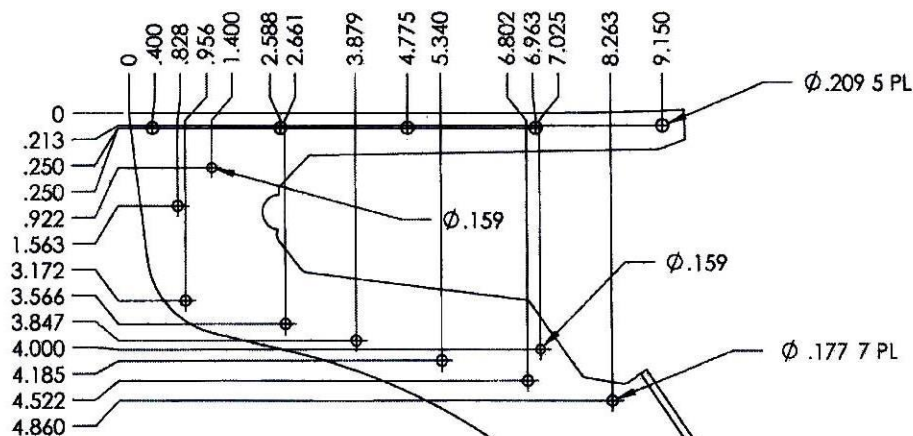
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



ORIGINAL DATE 10/01/08		APICAL INDUSTRIES	
DRAWN BY P. BRAYO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
CHECKED BY S. JOSEPH			
DRAWING APPROVAL S. JOSEPH			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 1 PLACE DECIMAL ±.01 2 PLACE DECIMAL ±.005 ANGLES ±.5°		646.3000	
SHEET B	CAGE CODE D7M26	QWG. NO. 646.3000	REV. N/A
SCALE NONE		SHEET 4 OF 8	

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REV	DESCRIPTION	DATE	APPROVED

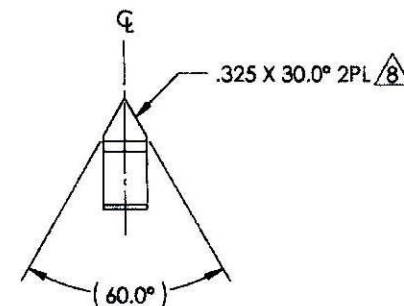
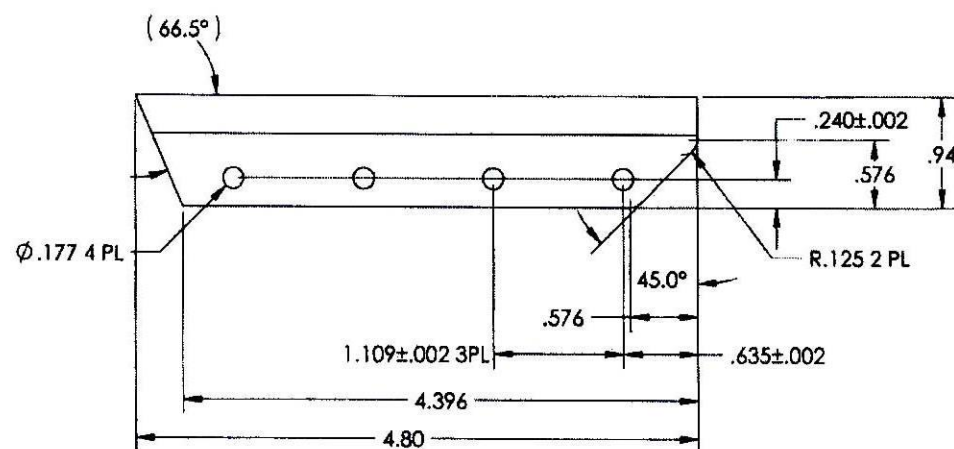
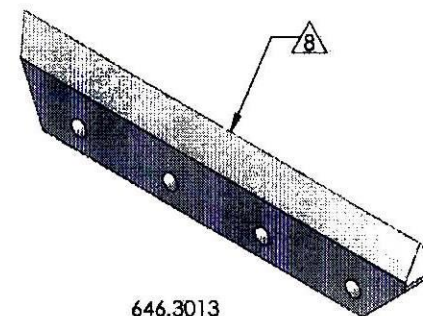
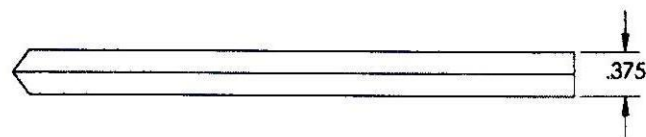


SECTION F-F 4/B6

ORIGINAL DATE 1/10/01 DRAWN BY P. BRAVO CHECKED S. JOSEPH DRAWING APPROVAL S. JOSEPH CONTRACT NO.	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°	LOWER CUTTER ASSY
REV B	CASH CODE 07M16
OWG NO. 646.3000	REV N/C
SCALE NONE	SHEET 5 OF 8

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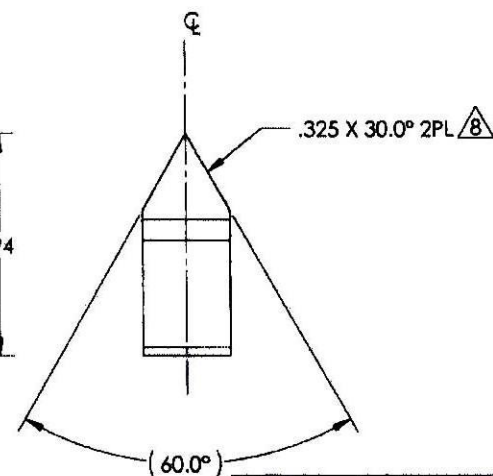
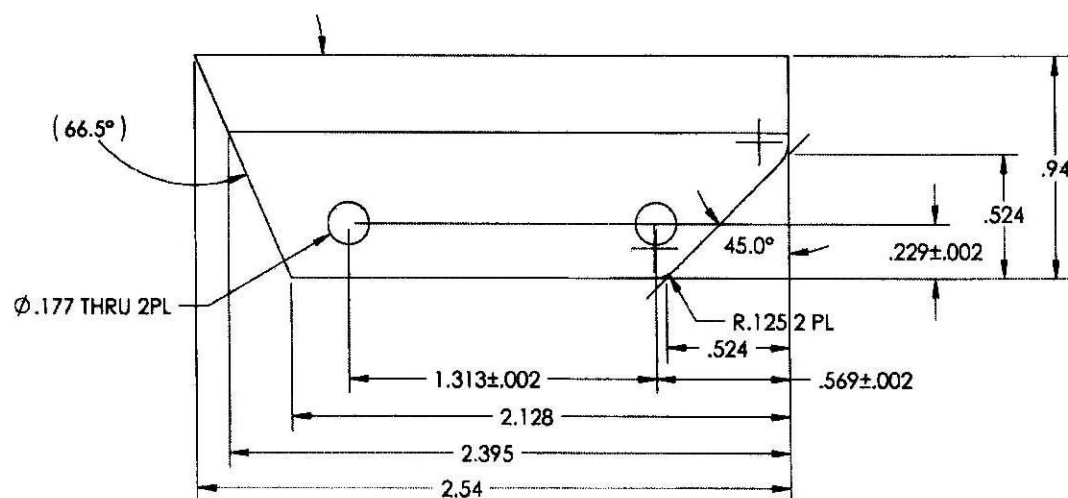
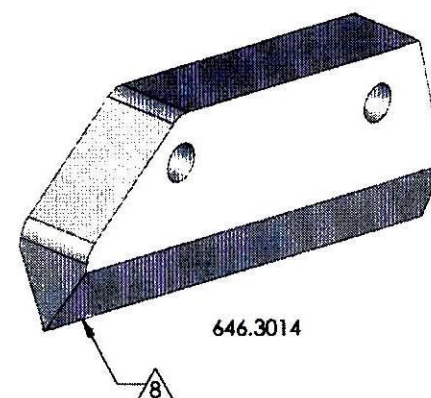
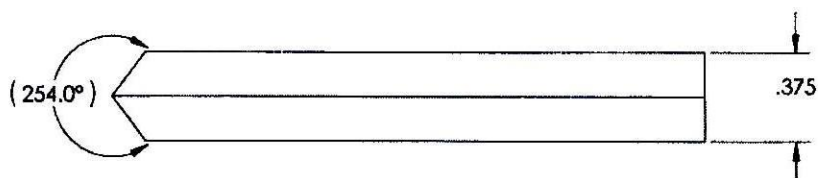
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



ORIGINAL DATE: 08-20-98 DESIGNED BY: J. B. BAYO DRAWN BY: J. B. BAYO CHECKED BY: J. B. BAYO APPROVED BY: J. B. BAYO CONTRACT NO:			
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300			
LOWER CUTTER ASSY			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ± .01 2 PLACE DECIMALS ± .005 ANGLES ± .5°	PART CODE 8 07M126	DRAWING NO. 646.3000	REV N/C
SCALE: NONE		SHEET 6 OF 8	

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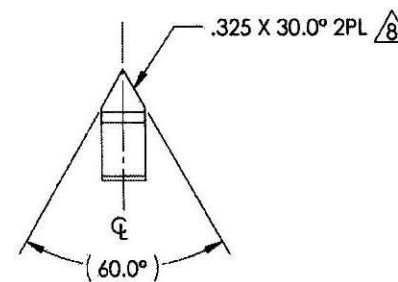
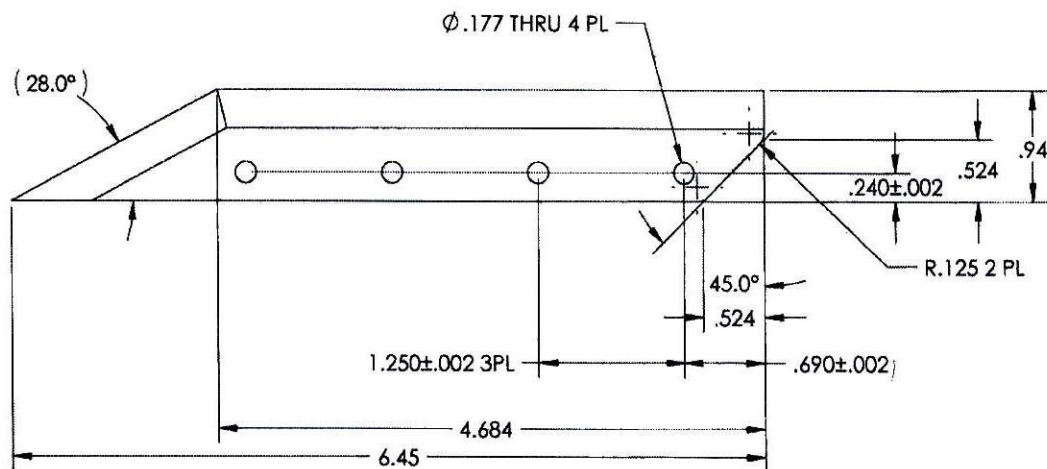
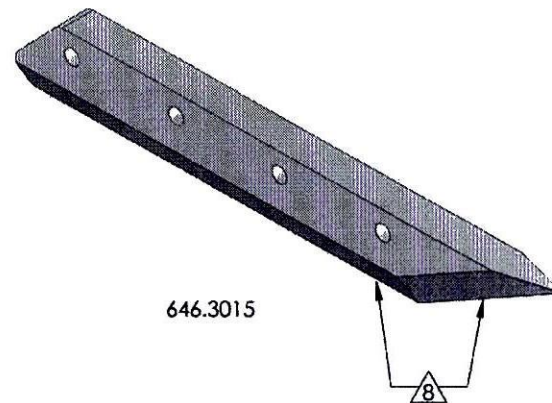
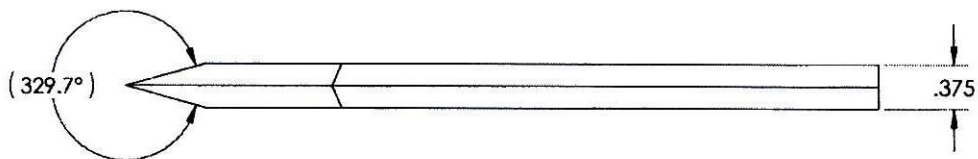
REVISIONS			
REV	DESCRIPTION	DATE	APPROVE



ORIGINAL DATE 08-20-89 BY J. JOSEPH DRAWING APPROVAL J. JOSEPH CONTRACT NO.	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR OCEANSIDE, CA. 92056 3512 (760)724-5300
LOWER CUTTER ASSY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS 1/16" .0005 1/32" .0005 1/64" .0005	SIZE / CASE CODE / DWD NO. / B 07M1A 646.3000 SCALAR / NONE / SHFT 7 OF 8

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



ORIGINAL DATE (M/D/Y)		28 25 08	
DRAWN BY		P. SPAYO	
CHECKED BY		S. JOSEPH	
DRAWING APPROVAL		S. JOSEPH	
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
SRI	CAGE CODE	DWG. NO.	REV.
B	07M126	646.3000	N/A
SCALE NONE		SHEET 8 OF 8	